## DOES THE FLORAL BAT LURE DIMETHYL DISULPHIDE ATTRACT THAILAND'S MOST COMMON BAT POLLINATOR?

by Gerald Carter & Alyssa Stewart

In the late 1990s, researchers discovered that in Central and South American flowers that were pollinated by bats often contained the chemical compound, dimethyl disulphide (DMDS). This compound smells foul to humans (DMDS is produced by rotting flesh) but it attracts nectar-feeding bats. Even captive-borne bats that have never fed from flowers or smelled DMDS, are powerfully attracted to it. At first, DMDS appeared to be part of a general bat pollination syndrome, where bat-pollinated flowers open at night, produce a lot of nectar, and smell sulphurous. However, several other observations suggest that DMDS might not be an effective bat lure outside the neotropics. For example, DMDS is absent in many bat-pollinated flowers of West Africa.

We tested for DMDS attraction in Thailand's most common and important bat pollinator, the dawn bat, or cave nectar bat (*shown on right*). We gave the bats choices of four flowers of local Ceiba trees, where one random flower was scented with DMDS. Rather than preferring the DMDS-treated flower, 21 of 22 bats chose an untreated one. Together with past evidence, this supports the notion that DMDS only attracts neotropical bats. This would not be too surprising: nectar-feeding in bats evolved in the neotropics and paleotropics independently, in two distinct lineages that diverged ~56 million years ago.


*(photo credit: A. Stewart)*